Complete Summary

GUIDELINE TITLE

Day case cataract surgery. A national clinical guideline.

BIBLIOGRAPHIC SOURCE(S)

Scottish Intercollegiate Guidelines Network (SIGN). Day case cataract surgery. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2001 Aug. 20 p. (SIGN publication; no. 53). [60 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Cataracts

GUIDELINE CATEGORY

Evaluation
Management

CLINICAL SPECIALTY

Nursing
Ophthalmology
Optometry

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Nurses
Optometrists
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide evidence-based recommendations for best practice in the management of day cataract surgery in adults
- To address the following:
    - Benefits, risks and complications of surgery, including economic benefits
    - Constraints on day case cataract surgery
    - Preoperative assessment
    - Anaesthesia for day case cataract surgery
    - Postoperative care

TARGET POPULATION

Adult patients with cataracts

INTERVENTIONS AND PRACTICES CONSIDERED

1. Referral by General Practitioner (GP) or Optometrist with a recent optometric report with all referrals
2. Multidisciplinary preoperative assessment and patient education/counselling
    - Preliminary assessment of patient needs
    - Medical evaluation including current medications and history of allergies
    - Ophthalmic evaluation and investigations if indicated
    - Preoperative treatment of any conditions e.g. blepharitis
    - Biometry and intraocular lens calculation and intraocular lens selection
    - Patient information (both written and verbal) and counselling (e.g., risks and benefits of day case cataract surgery, instruction on administration of eye drops)
3. Anaesthesia: local anaesthetic (topical, subconjunctival, retrobulbar, peribulbar, sub-Tenon's infiltration) or general anaesthetic
4. Intravenous (IV) sedation
5. Monitoring of patients during the surgery
6. Postoperative care

MAJOR OUTCOMES CONSIDERED

- Rates of day case surgery
- Complications, visual outcomes, economic benefits, and constraints associated with day case cataract surgery
- Differences in surgical complication rates, outcomes, and costs between day case and inpatient cataract surgery
- Quality of life
- Patient satisfaction

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Literature was searched related to cataract surgery. The reports relating to cataract surgery for the period of this review (1977 through 1998) were mainly from the United States of America.

The following general information regarding methods used to collect the evidence is from the companion document companion document titled "An Introduction to the SIGN Methodology for the Development of Evidence-based Clinical Guidelines" (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50]). Available from the Scottish Intercollegiate Guidelines Network (SIGN) Web site.

The training in critical appraisal and guideline development offered to members of Scottish Intercollegiate Guidelines Network (SIGN) guideline development groups encourages them to break down the guideline remit into a series of structured key questions that clearly identify the population concerned, the intervention under investigation, the outcome measures used, and the type of control used. These questions then form the basis of the literature search, which is undertaken or overseen by the Scottish Intercollegiate Guidelines Network Information Manager.

The search must focus on the best available evidence to address each key question, and should ensure maximum coverage of studies at the top of the hierarchy of study types. Scottish Intercollegiate Guidelines Network uses a set of standard search filters that identify:

- Existing guidelines, meta-analyses, and systematic reviews
- Randomized controlled trials
- Observational studies

In order to minimize bias and to ensure adequate coverage of the relevant literature, the literature search must cover a range of sources. All search strategies are reviewed either by the Scottish Intercollegiate Guidelines Network Information Manager or, where he has to be involved in conducting the search, by an external information professional with experience of searching the medical literature. As a minimum, SIGN requires searches to cover the Cochrane Library, Embase, Medline, and the Internet.

Additional details can be found in the companion document titled "An Introduction to the SIGN Methodology for the Development of Evidence-based Clinical Guidelines" (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50]). Available from the SIGN Web site.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Statements of Evidence:

Ia: Evidence obtained from meta-analysis of randomized controlled trials.

Ib: Evidence obtained from at least one randomized controlled trial.

IIa: Evidence obtained from at least one well-designed controlled study without randomization.

IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study.

III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

The Scottish Intercollegiate Guidelines Network (SIGN) carries out comprehensive systematic reviews of the literature using customized search strategies applied to a number of electronic databases and the Internet. This is often an iterative process whereby the guideline development group will carry out a search for existing guidelines and systematic reviews in the first instance and, after the results of this search have been evaluated, the questions driving the search may be redefined and focused before proceeding to identify lower levels of evidence.

Once papers have been selected as potential sources of evidence, the methodology used in each study is assessed to ensure its validity. Scottish Intercollegiate Guidelines Network has developed checklists to aid guideline developers to critically evaluate the methodology of different types of study design. The result of this assessment will affect the level of evidence allocated to the paper, which in turn will influence the grade of recommendation it supports.

Additional details can be found in the companion document titled "SIGN 50: A Guideline Developers' Handbook." (Edinburgh [UK]: Scottish Intercollegiate

Guidelines Network. [SIGN publication; no. 50]). Available from the SIGN Web site.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The process for synthesizing the evidence base to form graded guideline recommendations is illustrated in the companion document titled "SIGN 50: A Guideline Developer's Handbook." (Edinburgh [UK]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50], available from the SIGN website.

Evidence tables should be compiled, summarizing all the validated studies identified from the systematic literature review relating to each key question. These evidence tables form an important part of the guideline development record and ensure that the basis of the guideline development group's recommendations is transparent.

In order to address how the guideline developer was able to arrive at their recommendations given the evidence they had to base them on, SIGN has introduced the concept of considered judgement.

Under the heading of considered judgement, guideline development groups are expected to summarise their view of the total body of evidence covered by each evidence table. This summary view is expected to cover the following aspects:

- Quantity, quality, and consistency of evidence
- Generalisability of study findings
- Applicability to the target population of the guideline
- Clinical impact (i.e., the extent of the impact on the target patient population, and the resources need to treat them.)

Guideline development groups are provided with a pro forma in which to record the main points from their considered judgement. Once they have considered these issues, the group are asked to summarise their view of the evidence and assign a level of evidence to it, before going on to derive a graded recommendation.

The assignment of a level of evidence should involve all those on a particular guideline development group or subgroup involved with reviewing the evidence in relation to each specific question. The allocation of the associated grade of recommendation should involve participation of all members of the guideline development group. Where the guideline development group is unable to agree a unanimous recommendation, the difference of opinion should be formally recorded and the reason for dissent noted.

The recommendation grading system is intended to place greater weight on the quality of the evidence supporting each recommendation, and to emphasise that

the body of evidence should be considered as a whole, and not rely on a single study to support each recommendation. It is also intended to allow more weight to be given to recommendations supported by good quality observational studies where randomised controlled trials (RCTs) are not available for practical or ethical reasons. Through the considered judgement process guideline developers are also able to downgrade a recommendation where they think the evidence is not generalisable, not directly applicable to the target population, or for other reasons is perceived as being weaker than a simple evaluation of the methodology would suggest.

On occasion, there is an important practical point that the guideline developer may wish to emphasise but for which there is not, nor is their likely to be, any research evidence. This will typically be where some aspect of treatment is regarded as such sound clinical practice that nobody is likely to question it. These are marked in the guideline as "good practice points." It must be emphasized that these are not an alternative to evidence-based recommendations, and should only be used where there is no alternative means of highlighting the issue.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendations

Grade A: Requires at least one randomized controlled trial (RCT) as part of a body of literature of overall good quality and consistency addressing the specific recommendation (Evidence levels Ia, Ib).

Grade B: Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation (Evidence levels IIa, IIb, III).

Grade C: Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality (Evidence level IV).

Good Practice Points: Recommended best practice based on the clinical experience of the guideline development group.

COST ANALYSIS

The guideline developers reviewed published cost analyses. There is evidence that day case cataract surgery has economic benefits compared to inpatient care, with savings per case ranging from 14.5% to 32%.

There is no clear evidence that an exclusively day case facility could provide further savings although there is evidence that day case surgery performed on a dedicated local anaesthetic list will maximise savings. One study reported that although outpatient cataract surgery costs were lower to the health care system, it may be more costly for the patient and their informal carers (e.g., requiring carers to take time off work).

Given the lack of significant differences in outcomes and the economic benefits of day case over inpatient cataract surgery, the guideline development group recommends that all patients should be considered for day case surgery unless this is contraindicated.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

A national open meeting is the main consultative phase of Scottish Intercollegiate Guidelines Network (SIGN) guideline development, at which the guideline development group presents their draft recommendations for the first time. The national open meeting for this guideline was held in November 1999 and was attended by representatives of all the key specialties relevant to the guideline. The draft guideline was also available on the Scottish Intercollegiate Guidelines Network Web site for a limited period at this stage to allow those unable to attend the meeting to contribute to the development of the guideline.

The guideline was also reviewed in draft form by a panel of independent expert referees, who were asked to comment primarily on the comprehensiveness and accuracy of interpretation of the evidence base supporting the recommendations in the guideline.

As a final quality control check, the guideline is reviewed by an editorial group comprising the relevant specialty representatives on Scottish Intercollegiate Guidelines Network Council to ensure that the peer reviewer's comments have been addressed adequately and that any risk of bias in the guideline development process as a whole has been minimized.

Each member of the guideline development group then approved the final guideline for publication.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the Scottish Intercollegiate Guidelines Network (SIGN) and National Guideline Clearinghouse (NGC): In addition to these evidence-based recommendations, the guideline development group also identifies points of best clinical practice in the original guideline document.

The strength of recommendation grading (A-C) and level of evidence (Ia-IV) are defined at the end of the "Major Recommendations" field.

Referral for Cataract Surgery

C: A patient wishing surgical intervention should be referred for cataract surgery if there is cataract sufficient to significantly affect their lifestyle, irrespective of Snellen acuity.

Day Case Surgery

B: Day case surgery is the preferred form of care for patients having cataract surgery.

B: All patients in whom cataract surgery is indicated should be considered for surgery as a day case.

Preoperative Assessment

Multidisciplinary Assessment

B: The first ophthalmic consultation and preoperative assessment should be combined in a 'one-stop cataract clinic' where possible.

Patient Information and Counselling

C: All patients should be provided with information on cataract surgery and should be counselled on their expected treatment.

C: Nurses with specialist ophthalmic training should have a key role in the counselling of patients who are to undergo day case cataract surgery.

C: To reduce patient anxiety and ensure compliance, verbal communication should be supplemented by written information on all aspects of the patient's care.

Anaesthesia

B: Local anaesthetic is the preferred technique for day case cataract surgery.

Sedation for Ocular Anesthesia and Surgery

B: Intravenous sedation for cataract surgery should be administered with caution and only by anaesthetic personnel, who should then remain responsible for ensuring patient safety.

Postoperative Care

No graded recommendations are offered

Definitions:

Grades of Recommendations:

A. Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation. (Evidence levels Ia, Ib)
B. Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation. (Evidence levels IIa, IIb, III)
C. Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality. (Evidence level IV)

Statements of Evidence:

Ia: Evidence obtained from meta-analysis of randomized controlled trials.

Ib: Evidence obtained from at least one randomized controlled trial.

IIa: Evidence obtained from at least one well-designed controlled study without randomization.

IIb: Evidence obtained from at least one other type of well-designed quasi-experimental study.

III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The specific type of supporting evidence is explicitly identified in each section of the original guideline document.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Potential benefits of cataract surgery include:

- Improved subjective visual function
- Improved visual acuity

Refer to Table 1 titled "Visual Acuity Outcomes Following Cataract Surgery" in the original guideline document for visual acuity outcomes at final refraction

(performed within three months of surgery) as reported by the National Cataract Survey (UK).

- Improved health-related quality of life
- Slowed or reversed functional degeneration in older adults

Potential benefits of day case surgery include:

- No difference in surgical complication rate or visual acuity outcome compared to inpatient cataract surgery
- Decreased disruption to a patient´s domestic life than inpatient surgery
- High levels of patient satisfaction
- Economic benefits to health care system

  There is evidence that day case cataract surgery has economic benefits compared to inpatient care, with savings per case ranging from 14.5% to 32%. There is evidence that day case surgery performed on a dedicated local anaesthetic list will maximize savings.

Subgroups Most Likely to Benefit:

Patients without pre-existing ocular comorbidities are more likely to have better outcomes from cataract surgery than patients with pre-existing ocular comorbidities.

POTENTIAL HARMS

Complications of cataract surgery:

- The complications recorded during surgery reported in the National Cataract Survey (UK) are shown in Table 2 titled "Complications Related to Cataract Surgery" in the original guideline document. Although 23% of all patients experienced one or more complications within 48 hours of surgery, the great majority of these were minor, self-limiting events. The most frequently recorded events were corneal oedema (9.5%), raised intraocular pressure (7.9%), and uveitis (5.6%). The incidence of serious, sight-threatening complications (e.g., endophthalmitis, retinal detachment or tear) within three months of a cataract operation is extremely low (<0.2%).

Adverse effects of anaesthesia and intravenous sedation:

- There is recognized morbidity with anaesthesia and adjunctive intravenous sedation used for cataract surgery. Minor symptoms and self-limiting morbidity (e.g., sore throat, nausea) have been shown to be common after cataract surgery. Several studies describe central nervous system symptoms as a complication, due to spread of local anesthetic from the orbit secondary to needle penetration of the dural sheath of the optic nerve. The described incidence with retrobulbar block varies between 1/430 and 1/1200. Although respiratory arrest and brainstem anaesthesia have been reported as rare complications of both retrobulbar and peribulbar anaesthesia, they have not

been reported with the use of topical, sub-conjunctival, or sub-Tenon's infiltration of local anesthetic using a blunt cannula.
- Serious adverse systemic events have been reported with all local anaesthesia techniques, including topical anaesthesia.
- All intravenous sedatives are associated with dose-related central nervous system depression, respiratory depression, cardiovascular depression, and suppression of protective airway reflexes.

Increased costs to patients and their informal carers:

- One study reported that although outpatient cataract surgery costs were lower to the health care system, it may be more costly for the patient and their informal carers (e.g., requiring carers to take time off work).

CONTRAINDICATIONS

CONTRAINDICATIONS

Relative contraindications to day case surgery include:

- Patients with pre-existing ocular pathology, e.g. uveitis, glaucoma, necessitating close specialist postoperative supervision
- Uniocular patients
- Patients with severe medical problems requiring close postoperative supervision

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This guideline is not intended to be construed or to serve as a standard of clinical care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. These parameters of practice should be considered guidelines only. Adherence to them will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgment regarding a particular clinical procedure or treatment plan must be made in light of the clinical data presented by the patient and the diagnostic and treatment options available. However, it is advised that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Implementation of national clinical guidelines is the responsibility of each National Health System (NHS) Trust (UK) and is an essential part of clinical governance. It

is acknowledged that every Trust cannot implement every guideline immediately on publication, but mechanisms should be in place to ensure that the care provided is reviewed against the guideline recommendations and the reasons for any differences assessed and, where appropriate, addressed. These discussions should involve both clinical staff and management. Local arrangements may then be made to implement the national guideline in individual hospitals, units and practices, and to monitor compliance. This may be done by a variety of means including patient-specific reminders, continuing education and training, and clinical audit.

This guideline has been constructed around the patient's "journey of care," from presentation to the first postoperative visit. The journey of care involves a number of steps, detailed in the original guideline document.

Key outcome measures for audit are identified in the original guideline document.

The guideline developer refers users to the section of the original guideline document Implementation and Audit for additional information.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Patient-centeredness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Scottish Intercollegiate Guidelines Network (SIGN). Day case cataract surgery. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2001 Aug. 20 p. (SIGN publication; no. 53). [60 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Aug

GUIDELINE DEVELOPER(S)

Scottish Intercollegiate Guidelines Network - National Government Agency [Non-U.S.]

SOURCE(S) OF FUNDING

Scottish Executive Health Department

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Guideline Development Group: Dr Stuart Roxburgh (Chairman); Dr George Craig; Miss Parul Desai; Mrs Ruth Gardner; Dr Alan Gaskell; Dr Tom Goudie; Dr Alison Graham; Dr Frank Green; Mr Robin Harbour; Dr Peter Kyle; Mr Richard Mazur; Dr Bob Murray; Dr Robert Murray; Dr Moray Nairn; Dr Ian Shepherd; Dr Caroline Styles; Miss Joanne Topalian; Mr John Wallace

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All members of the Scottish Intercollegiate Guidelines Network (SIGN) guideline development groups are required to complete a declaration of interests, both personal and non-personal. A personal interest involves payment to the individual concerned, e.g., consultancies or other fee-paid work commissioned by or shareholdings in the pharmaceutical industry; a non-personal interest involves payment which benefits any group, unit or department for which the individual is responsible, e.g., endowed fellowships or other pharmaceutical industry support. SIGN guideline group members should be able to act as independently of external commercial influences as possible, therefore, individuals who declare considerable personal interests may be asked to withdraw from the group. Details of the declarations of interest of any guideline development group member(s) are available from the SIGN executive.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline was issued in 2001 and will be reviewed in 2004 or sooner if new evidence becomes available.

Any amendments to the guideline in the interim period will be noted on Scottish Intercollegiate Guidelines Network (SIGN) Web site.

GUIDELINE AVAILABILITY

Electronic copies: Available from the Scottish Intercollegiate Guidelines Network (SIGN) Web site:

- HTML format
- Portable Document Format (PDF)

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Quick reference guide: Day case cataract surgery. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001. 2 p. Available in Portable Document Format (PDF) from the Scottish Intercollegiate Guidelines Network (SIGN) Web site
- SIGN 50: A guideline developer's handbook. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001 Feb. (SIGN publication; no. 50). Electronic copies available from the SIGN Web site.
- Appraising the quality of clinical guidelines. The SIGN guide to the AGREE (Appraisal of Guidelines Research and Evaluation) guideline appraisal instrument. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001. Available from SIGN Web site

PATIENT RESOURCES

The following is available:

- Key messages for patients. In: Day case cataract surgery. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network, 2001 Aug. pp. 15-16. (SIGN publication; no. 53).

Electronic copies: Available from the Scottish Intercollegiate Guidelines Network (SIGN) Web site:

- HTML format
- Portable Document Format (PDF)

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on April 17, 2002. The information was verified by the guideline developer on July 11, 2002.

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